

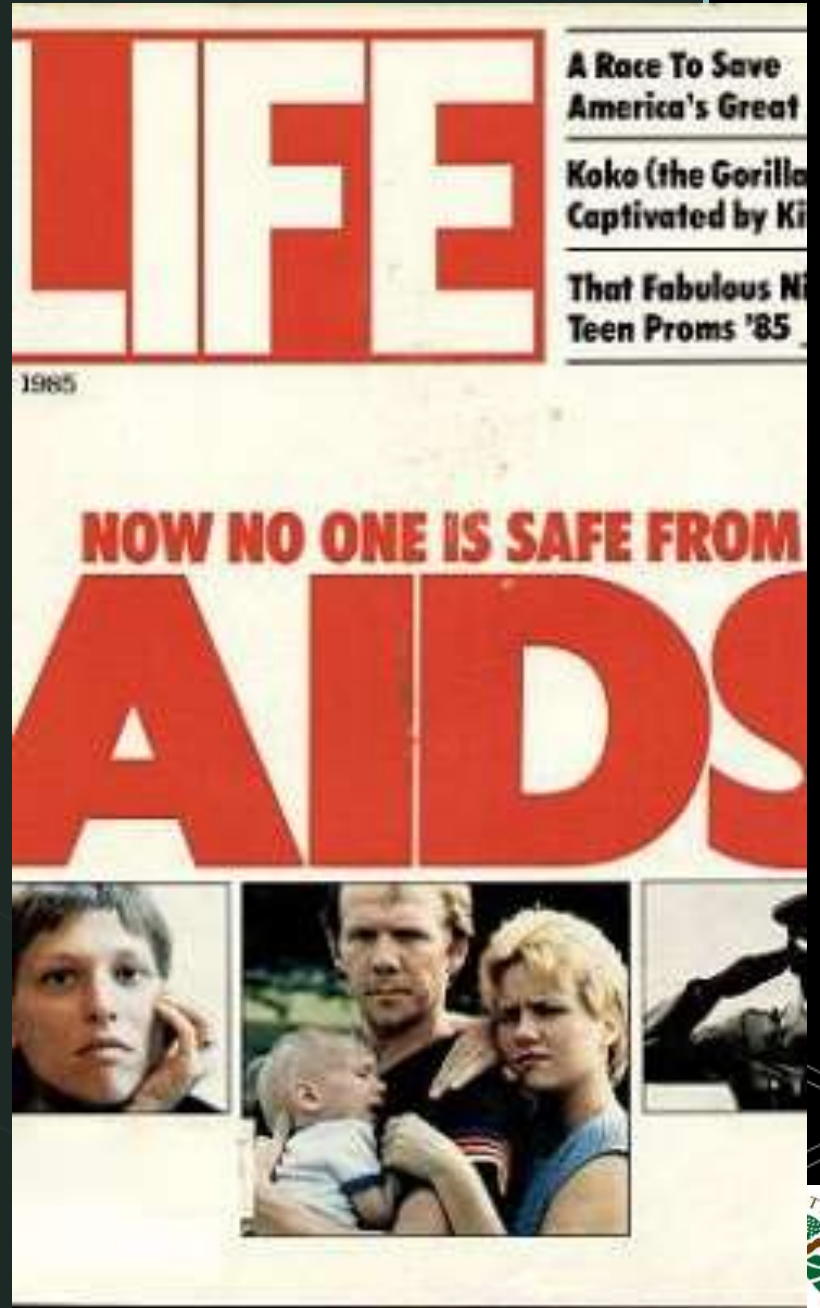
Sarah Y. Park, MD, FAAP
State Epidemiologist
Chief, Disease Outbreak Control Division
Hawaii Department of Health

Emerging Infectious Disease (EID) Concerns for Hawaii



What Are EIDs?

- Infections recently appearing within a population or those whose incidence or geographic range rapidly increased (past 2 decades) or threatens to increase in near future
- Potential causative agents:
 - Previously undetected or unknown infectious agents
 - Known agents spreading to new geographic locations or populations
 - Previously known agents with unrecognized role in specific diseases
 - Re-emerging agents whose disease incidence historically, significantly declined, but whose disease incidence reappeared
- Cause global societal and economic impacts



Factors Contributing to EIDs

- Natural evolution/adaptation
- Outcome of human behavior—for example:
 - Inappropriate or increased antimicrobial use
 - Travel
 - Crowding—population growth
 - Migration—rural to urban
 - Ecological, potentially destructive, change
 - Social disparity
 - Association with animal population
 - Intentional—war, bioterrorism



Conditions for Establishing EID

- Vulnerable or susceptible population—e.g., novel agent or no/low immunity
- Transmission via person-to-person or via readily available, difficult to control vectors
- Sustainable in population once introduced

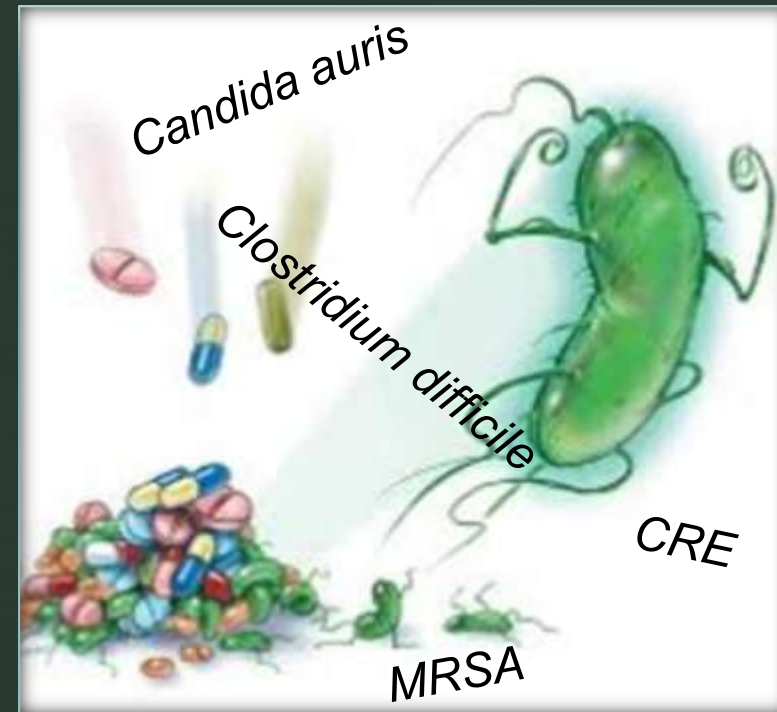
Some Specific Concerns for Hawaii

- Antimicrobial resistance
- Arboviral diseases
- Mumps
- Pandemic influenza
- MERS-CoV
- SARS?
- Ebola



Some Specific Concerns for Hawaii

- **Antimicrobial resistance**
- Arboviral diseases
- Mumps
- Pandemic influenza
- MERS-CoV
- SARS?
- Ebola



Some Specific Concerns for Hawaii

- Antimicrobial resistance
- **Arboviral diseases**
- Mumps
- Pandemic influenza
- MERS-CoV
- SARS?
- Ebola



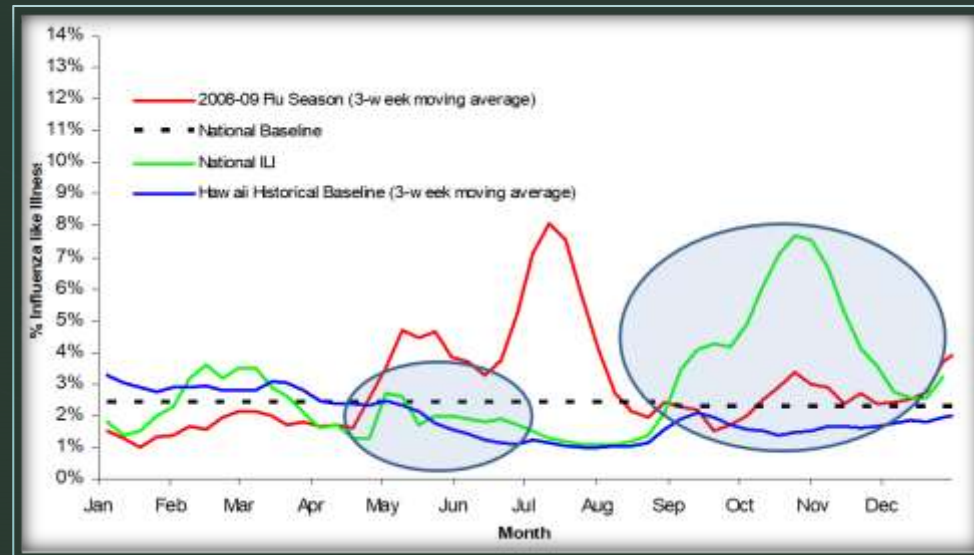
Some Specific Concerns for Hawaii

- Antimicrobial resistance
- Arboviral diseases
- **Mumps**
- Pandemic influenza
- MERS-CoV
- SARS?
- Ebola



Some Specific Concerns for Hawaii

- Antimicrobial resistance
- Arboviral diseases
- Mumps
- **Pandemic influenza**
- MERS-CoV
- SARS?
- Ebola



Some Specific Concerns for Hawaii

- Antimicrobial resistance
- Arboviral diseases
- Mumps
- Pandemic influenza
- **MERS-CoV**
- SARS?
- Ebola



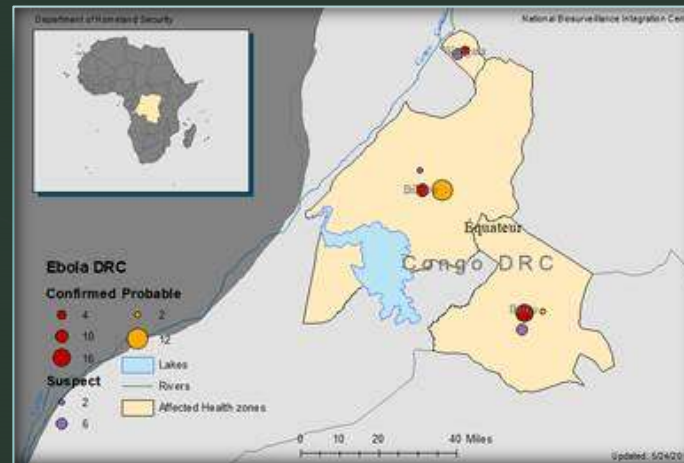
Some Specific Concerns for Hawaii

- Antimicrobial resistance
- Arboviral diseases
- Mumps
- Pandemic influenza
- MERS-CoV
- **SARS?**
- Ebola



Some Specific Concerns for Hawaii

- Antimicrobial resistance
- Arboviral diseases
- Mumps
- Pandemic influenza
- MERS-CoV
- SARS?
- **Ebola**



References

- Morens DM, Fauci AS. Emerging infectious diseases: threats to human health and global stability. *PLoS Pathog*, July 2013.
- Baylor College of Medicine: Emerging Infectious Diseases, <https://www.bcm.edu/departments/molecular-virology-and-microbiology/emerging-infections-and-biodefense/emerging-infectious-diseases>.
- National Institute of Allergy and Infectious Diseases: Emerging Infectious Diseases/Pathogens, <https://www.niaid.nih.gov/research/emerging-infectious-diseases-pathogens>.
- World Health Organization: List of Top Emerging Diseases likely to Cause Major Epidemics, <http://www.who.int/medicines/ebola-treatment/WHO-list-of-top-emerging-diseases/en/>.





Mahalo!